

COMPACT GAMMA-RAY LASERS AND GAMMA-RAY HOLOGRAMS

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The results of experimental investigations of strongly directed short wave gamma-ray laser generation from micro craters of compact solid-state targets after laser nuclear activation [1] as well as from laser-produced micro jets of tantalum-181 plasma [2]. In difference from [2], when laser radiation was on the wavelength ≈ 2 Å, in last experiments we can obtain coherent gamma-ray radiation on the wavelengths $\lambda \approx 0.1-0.05$ Å. To verify this we created the gamma-ray holograms of DNA-molecules, atoms in graphene and separated atoms.

1. N.I.Vogel, V.A.Skvortsov. LXII International conference “Nucleus 2012”. Book of Abstracts. June 25-30, 2012. Voronezh, Russia. 2012. P.86, 241.
2. V.A.Skvortsov, N.I.Vogel. Proc. SPIE Intern. Conf. on Nonlinear and Coherence Optics. Kazan', Russia. 22-26 August 2010. Published by SPIE. Washington. 2011.V.7993. OJ.